

KB

OIPE

## RAW SEQUENCE LISTING

DATE: 01/17/2002

PATENT APPLICATION: US/09/937,521

TIME: 07:26:55

Input Set : A:\1422-0493P.st25.txt

Output Set: N:\CRF3\01172002\I937521.raw

ENTERED

3 <110> APPLICANT: ITO, Makoto  
5 <120> TITLE OF INVENTION: Ceramidase Gene  
7 <130> FILE REFERENCE: 1422-0493P  
9 <140> CURRENT APPLICATION NUMBER: 09/937,521  
10 <141> CURRENT FILING DATE: 2001-09-26  
12 <150> PRIOR APPLICATION NUMBER: PCT/JP00/01802  
13 <151> PRIOR FILING DATE: 2000-03-24  
15 <150> PRIOR APPLICATION NUMBER: JP 11-84743  
16 <151> PRIOR FILING DATE: 1999-03-26  
18 <160> NUMBER OF SEQ ID NOS: 18  
20 <170> SOFTWARE: PatentIn version 3.1  
22 <210> SEQ ID NO: 1  
23 <211> LENGTH: 21  
24 <212> TYPE: PRT  
25 <213> ORGANISM: Mus sp.  
27 <220> FEATURE:  
28 <221> NAME/KEY: MISC\_FEATURE  
29 <222> LOCATION: (1)..(21)  
30 <223> OTHER INFORMATION: any Xaa = any amino acid, unknown, or other  
33 <400> SEQUENCE: 1  
35 Phe Ser Gly Tyr Tyr Ile Xaa Val Xaa Arg Ala Asp Xaa Thr Gly Lys  
36 1 5 10 15  
39 Val Asn Asp Ile Asn  
40 20  
43 <210> SEQ ID NO: 2  
44 <211> LENGTH: 10  
45 <212> TYPE: PRT  
46 <213> ORGANISM: Mus sp.  
48 <220> FEATURE:  
49 <221> NAME/KEY: MISC\_FEATURE  
50 <222> LOCATION: (1)..(10)  
51 <223> OTHER INFORMATION: any Xaa = any amino acid, unknown, or other  
54 <400> SEQUENCE: 2  
56 Ala Ile Ala Thr Asp Thr Val Ala Xaa Met  
57 1 5 10  
60 <210> SEQ ID NO: 3  
61 <211> LENGTH: 35  
62 <212> TYPE: PRT  
63 <213> ORGANISM: Mus sp.  
65 <220> FEATURE:  
66 <221> NAME/KEY: MISC\_FEATURE  
67 <222> LOCATION: (1)..(35)  
68 <223> OTHER INFORMATION: any Xaa = any amino acid, unknown, or other  
71 <400> SEQUENCE: 3  
73 Gly Tyr Leu Pro Gly Gln Gly Pro Phe Val Asn Gly Phe Ala Ser Ser  
74 1 5 10 15  
77 Asn Leu Gly Asp Val Ser Pro Asn Ile Leu Gly Pro Xaa Xaa Val Asn

## RAW SEQUENCE LISTING

DATE: 01/17/2002

PATENT APPLICATION: US/09/937,521

TIME: 07:26:55

Input Set : A:\1422-0493P.st25.txt

Output Set: N:\CRF3\01172002\I937521.raw

```

78          20          25          30
81 Thr Gly Glu
82          35
85 <210> SEQ ID NO: 4
86 <211> LENGTH: 17
87 <212> TYPE: DNA
88 <213> ORGANISM: Artificial Sequence
90 <220> FEATURE:
91 <223> OTHER INFORMATION: Synthetic oligonucleotide primer 53-S1 directed to gene
derived f
92          rom Mus sp. liver
94 <220> FEATURE:
95 <221> NAME/KEY: misc_feature
96 <222> LOCATION: (1)..(17)
97 <223> OTHER INFORMATION: any n = a, c, g, t, any, unknown, or other
100 <400> SEQUENCE: 4
WOK 101 caggncnt tygtngc 17
104 <210> SEQ ID NO: 5
105 <211> LENGTH: 17
106 <212> TYPE: DNA
107 <213> ORGANISM: Artificial Sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: Synthetic oligonucleotide primer 53-A3 directed to gene
derived f
111          rom Mus sp. liver
113 <220> FEATURE:
114 <221> NAME/KEY: misc_feature
115 <222> LOCATION: (1)..(17)
116 <223> OTHER INFORMATION: any n = a, c, t, g, any, unknown, or other
119 <400> SEQUENCE: 5
OK 120 ggncnagda trttngg 17
123 <210> SEQ ID NO: 6
124 <211> LENGTH: 38
125 <212> TYPE: DNA
126 <213> ORGANISM: Mus sp.
128 <400> SEQUENCE: 6
129 gcaggtttg cttcatcaaa tctcggagac gtgtcacc 38
132 <210> SEQ ID NO: 7
133 <211> LENGTH: 19
134 <212> TYPE: DNA
135 <213> ORGANISM: Artificial Sequence
137 <220> FEATURE:
138 <223> OTHER INFORMATION: Synthetic oligonucleotide primer MA1 directed to gene
derived fro
139          m Mus sp. liver
141 <400> SEQUENCE: 7
142 ttgatgaagc aaagcctgc 19
145 <210> SEQ ID NO: 8
146 <211> LENGTH: 19
147 <212> TYPE: DNA
148 <213> ORGANISM: Artificial Sequence
150 <220> FEATURE:

```

## RAW SEQUENCE LISTING

DATE: 01/17/2002

PATENT APPLICATION: US/09/937,521

TIME: 07:26:55

Input Set : A:\1422-0493P.st25.txt

Output Set: N:\CRF3\01172002\I937521.raw

151 <223> OTHER INFORMATION: Synthetic oligonucleotide primer MA2 directed to gene  
derived fro

152 m Mus sp. liver

154 &lt;400&gt; SEQUENCE: 8

155 ggtgacacgt ctccgagat

19

158 &lt;210&gt; SEQ ID NO: 9

159 &lt;211&gt; LENGTH: 20

160 &lt;212&gt; TYPE: DNA

161 &lt;213&gt; ORGANISM: Artificial Sequence

163 &lt;220&gt; FEATURE:

164 <223> OTHER INFORMATION: Synthetic oligonucleotide primer T7in directed to gene  
derived fr

165 om Mus sp. liver

167 &lt;400&gt; SEQUENCE: 9

168 taatacgact cactataggg

20

171 &lt;210&gt; SEQ ID NO: 10

172 &lt;211&gt; LENGTH: 17

173 &lt;212&gt; TYPE: DNA

174 &lt;213&gt; ORGANISM: Artificial Sequence

176 &lt;220&gt; FEATURE:

177 <223> OTHER INFORMATION: Synthetic oligonucleotide primer T7out directed to gene  
derived f

178 rom Mus sp. liver

180 &lt;400&gt; SEQUENCE: 10

181 tctgctctaa aagctgc

17

184 &lt;210&gt; SEQ ID NO: 11

185 &lt;211&gt; LENGTH: 3108

186 &lt;212&gt; TYPE: DNA

187 &lt;213&gt; ORGANISM: Mus sp.

189 &lt;400&gt; SEQUENCE: 11

190 cctgcgccac ttctctctcc cggtcacaac ggggagcett ttctctcccc cgtctcgcgc 60

192 ctgccgccat ctccacccct gcctgcccc ggggtctgtg gacgcccggg cagagagcaa 120

194 gcaccgagct gggcctgctg gagaccggag accagcggcc cgcccgcccg cccgctgcga 180

196 gcctcctgag cagctccgga acagcttact ttctgtttcc atctctttcg gaccgggttg 240

198 gcctctccaa aagccacttc tctaaactct tatcaagggt caaaggctaa aggtctgtac 300

200 acatgagtgc tgggtgtgctt agaggcatcg ggtccctttc agctggagtt gcagtacttg 360

202 tgagtgccat ggaatccaaa ttoggcaaga gatacaatct aaactctcaa ctactccaga 420

204 ttcaagggttc acctcacttt ctggttacca aaggagcttt gcggggccgc tctgacatcc 480

206 agtagatttg gaaacacatt gagaaatcag cctgagcaac ctgcaaggca caaggcacia 540

208 gattctgcat gggtatttgc tctcccagga ggtgaacact tgttttgatt cacagagtca 600

210 ggggttgagat gccagtttgt tctcatctt ggctcagaag aagcacctag gaataaaagc 660

212 tctaagctgg tattaagtag aatgggctta aagtccacta caggaaacaa cagctagtga 720

214 cagaaatggc aaagcgaacc ttctccacct tggaggcatt cctcattttc cttctggtta 780

216 taatgacagt catcacagt gccctttctc cctcttgtt tgttaccagt gggaccattg 840

218 aaaaccacaa agattcagga aatcactggt ttcaaccac tctgggctcc acgacaacc 900

220 agccccctcc aattacacag actccaaact tcccttcatt tcggaacttc agtggctact 960

222 acattggcgt tgggagagcg gattgcacag gacaagtgtc agatatcaat ttgatgggct 1020

224 atggcaaaaa tggccagaat gcacggggtc tctcaccag gctgttcagc cgtgctttta 1080

226 tcttggcgga tccagatggg tcaaatcgaa tggcatttgt gagcgtggaa ctatgtatga 1140

228 ttcccaacg actgaggttg gaggtcctga agagactaga gagtaaataat ggctctctgt 1200

230 atcgaagaga caatgttatc ctgagtgcc ttcacacaca ctctggccca gcagggtttt 1260

232 tccaatatac actctatata ctgccagcg agggattcag caaccggacc tttcagtaca 1320

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/937,521

DATE: 01/17/2002

TIME: 07:26:55

Input Set : A:\1422-0493P.st25.txt

Output Set: N:\CRF3\01172002\I937521.raw

```

234 tagtctctg gatcatgaag agcattgata tagctcacac aaatcttaaa ccaggcaaaa 1380
236 tctttatcaa caaaggaaat gttgctaata tgcagatcaa ccgaagcccc tctcttacc 1440
238 ttctgaatcc acagtcagag agagcaaggt attcttcaaa cacagacaag gaaatgctgg 1500
240 tcttgaaact ggtggatttg aatggagaag acttgggtct tatcagctgg tttgccatcc 1560
242 accccgtgag catgaacaat agcaaccact ttgtgaatag tgacaatatg ggctatgcgg 1620
244 cttacctttt tgagcaagaa aagaacaaag gctatctgcc tggacaggga ccgtttgtag 1680
246 caggctttgc ttcataaat ctgggagacg tgcacccaa cattcttggc ccgcattgtg 1740
248 tcaacacagg ggagtcttgt gacaacgaca agagcacctg tcccaacggg gggcctagca 1800
250 tgtgcatggc cagcggacct ggacaagaca tgtttgagag cacacacatt ataggacgga 1860
252 tcatctatca gaaggccaag gagctgtatg cctctgcctc ccaggagggt accggcccag 1920
254 tgcttgcagc tcaccagtgg gtgaacatga cagatgtgag cgtccagctc aatgccacac 1980
256 acacagtga gacgtgtaaa cctgccctgg gctacagttt tgcgcaggc acaattgatg 2040
258 gagtttcggg cctcaatatt acacaggga ctacggaagg ggatccattc tgggacactc 2100
260 ttcgggacca gctcttggga aaaccatctg aagagattgt agagtgtcag aaacccaaac 2160
262 caatcctgct tcacagtggg gagctgacga taccacatcc ttggcaacca gatattgttg 2220
264 atgttcagat tgttaccgtt gggctccttg ccatactgct tatccctggg gaattaacaa 2280
266 ccattgctgg acgaagattt cgtgaggcaa ttaaaaaaga atttgcactt tatgggatga 2340
268 aggatatgac cgttggtatc gcagggtctaa gcaatgttta tacacattac attaccacat 2400
270 atgaagaata ccaggctcag cggtaacgag cagcatctac aatctatgga ccacacaccc 2460
272 tgtctgcata catccaactc ttcagagacc ttgctaaggc aattgctacg gacacagtag 2520
274 ccaacatgag cagtgggtccc gagcctccat tcttcaaaaa tctaatagct tcaattattc 2580
276 ctaatatatg ggatagagca ccaattggca aacatttttg ggatgtcttg cagccagcaa 2640
278 aacctgaata cagagtggga gaagtgggtt aagttatatt tgtaggcgct aacccaaaga 2700
280 attcagcaga gaaccagacc catcaaacct tctcactgtt ggagaaatac gaggactctg 2760
282 tagctgactg gcagataatg tataacgatg cctcctggga gacgaggttt tattggcaca 2820
284 aaggaatact gggctctgagc aatgcaacaa tatactggca tattccagat actgcctacc 2880
286 ctggaatcta cagaataaga tttttggac acaatcgga gcaggaactt ctgaaaccg 2940
288 ctgtcatact agcatttgaa ggaatttctt ctccttttga agttgtcact acttagtgaa 3000
290 aagttgacag atattgaaga aaagcttttc tctgtgcaca ttatagagtg aattcacaaa 3060
292 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 3108
295 <210> SEQ ID NO: 12
296 <211> LENGTH: 2271
297 <212> TYPE: DNA
298 <213> ORGANISM: Mus sp.
300 <400> SEQUENCE: 12
301 atggcaaagc gaaccttctc caccttggag gcattcctca ttttcttctt ggtaataatg 60
303 acagtcatca cagtggccct tctcaccctc ttgtttgtta ccagtgggac cattgaaaac 120
305 cacaagattc caggaaatca ctggttttca accactctgg gctccacgac aaccagccc 180
307 cctccaatta cacagaactc aaacttccct tcaattcgga acttcagtgg ctactacatt 240
309 ggcgttggga gagcggattg cacaggacaa gtgtcagata tcaatttgat gggctatggc 300
311 aaaaatggcc agaatgcacg gggctctctc accaggctgt tcagccgtgc ttttatcttg 360
313 gcggatccag atgggtcaaa tcgaatggca tttgtgagcg tggaaactat tatgatttcc 420
315 caacgactga ggttggaggc cctgaagaga ctagagagta aatatggctc tctgtatcga 480
317 agagacaatg ttatcctgag tgccattcac acacactctg gccagcagg gtttttccaa 540
319 tatacactct atatactgc cagcgaggga ttcagcaacc ggaccttcca gtacatagtc 600
321 tctgggatca tgaagagcat tgatatagct cacacaaatc ttaaaccagg caaaatcttt 660
323 atcaacaaag gaaatgttgc taatgtgcag atcaaccgaa gccctcctc ttacctctg 720
325 aatccacagt cagagagagc aaggtattct tcaaacacag acaaggaaat gctggctctg 780
327 aaactggtgg atttgaatgg agaagacttg ggtcttatca gctggtttgc catccacccc 840

```

## RAW SEQUENCE LISTING

DATE: 01/17/2002

PATENT APPLICATION: US/09/937,521

TIME: 07:26:55

Input Set : A:\1422-0493P.st25.txt

Output Set: N:\CRF3\01172002\I937521.raw

```

329 gtgagcatga acaatagcaa ccactttgtg aatagtgaca atatgggcta tgcggcttac 900
331 cttttttgagc aagaaaaagaa caaaggctat ctgcctggac agggaccggt tgtagcaggc 960
333 tttgcttcat caaatctcgg agacgtgtca cccaacattc ttggcccgca ttgtgtcaac 1020
335 acaggggaggt cttgtgacaa cgacaagagc acctgtccca acggtggggc tagcatgtgc 1080
337 atggccagcg gacctggaca agacatgttt gagagcacac acattatagg acggatcatc 1140
339 tatcagaagg ccaaggagct gtatgcctct gcctcccagg aggtgaccgg cccagtgtct 1200
341 gcagctcacc agtgggtgaa catgacagat gtgagcgtcc agctcaatgc cacacacaca 1260
343 gtgaagacgt gtaaacctgc cctgggctac agttttgcgc caggcacaat tgatggagtt 1320
345 tcgggcctca atattacaca gggaaactac gaaggggata cattctggga cactcttcgg 1380
347 gaccagctct tgggaaaaacc atctgaagag attgtagagt gtcagaaacc caaaccaatc 1440
349 ctgcttcaca gtggagagct gacgatacca catccttggc aaccagatat tgttgatgtt 1500
351 cagattgtta ccgttgggtc cttggccata gctgctatcc ctggggaatt aacaaccatg 1560
353 tcgggacgaa gatttcgtga ggcaattaaa aaagaatttg cactttatgg gatgaaggat 1620
355 atgaccgttg ttatcgcagg tctaagcaat gtttatacac attacattac cacatatgaa 1680
357 gaataaccagg ctcagcggta cgaggcagca totacaatct atggaccaca caccctgtct 1740
359 gcatacatcc aactcttcag agaccttgct aaggcaattg ctacggacac agtagccaac 1800
361 atgagcagtg gtcccagacc tccattcttc aaaaatctaa tagcttcact tattcctaact 1860
363 attgcggata gagaccaat tggcaaacat tttggggatg tcttgacgac agcaaacct 1920
365 gaatacagag tgggagaagt ggttgaagtt atattttagt gcgctaacc aaagaattca 1980
367 gcagagaacc agaccatca aaccttctc actgtggaga aatacgagga ctctgtagct 2040
369 gactggcaga taatgtataa cgatgcctcc tgggagacga ggttttattg gcacaaagga 2100
371 atactgggtc tgagcaatgc aacaatatac tggcatattc cagatactgc ctacctgga 2160
373 atctacagaa taagatatatt tggacacaat cggaagcagg aacttctgaa acccgctgtc 2220
375 atactagcat ttgaaggaat ttcttctcct tttgaagttg tcactactta g 2271

```

378 &lt;210&gt; SEQ ID NO: 13

379 &lt;211&gt; LENGTH: 756

380 &lt;212&gt; TYPE: PRT

381 &lt;213&gt; ORGANISM: Mus sp.

383 &lt;400&gt; SEQUENCE: 13

```

385 Met Ala Lys Arg Thr Phe Ser Thr Leu Glu Ala Phe Leu Ile Phe Leu
386 1 5 10 15
389 Leu Val Ile Met Thr Val Ile Thr Val Ala Leu Leu Thr Leu Leu Phe
390 20 25 30
393 Val Thr Ser Gly Thr Ile Glu Asn His Lys Asp Ser Gly Asn His Trp
394 35 40 45
397 Phe Ser Thr Thr Leu Gly Ser Thr Thr Thr Gln Pro Pro Pro Ile Thr
398 50 55 60
401 Gln Thr Pro Asn Phe Pro Ser Phe Arg Asn Phe Ser Gly Tyr Tyr Ile
402 65 70 75 80
405 Gly Val Gly Arg Ala Asp Cys Thr Gly Gln Val Ser Asp Ile Asn Leu
406 85 90 95
409 Met Gly Tyr Gly Lys Asn Gly Gln Asn Ala Arg Gly Leu Leu Thr Arg
410 100 105 110
413 Leu Phe Ser Arg Ala Phe Ile Leu Ala Asp Pro Asp Gly Ser Asn Arg
414 115 120 125
417 Met Ala Phe Val Ser Val Glu Leu Cys Met Ile Ser Gln Arg Leu Arg
418 130 135 140
421 Leu Glu Val Leu Lys Arg Leu Glu Ser Lys Tyr Gly Ser Leu Tyr Arg
422 145 150 155 160

```

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/937,521

DATE: 01/17/2002

TIME: 07:26:56

Input Set : A:\1422-0493P.st25.txt

Output Set: N:\CRF3\01172002\I937521.raw

L:35 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:56 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:77 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5